EXECUTIVE ORDER U-R-049-0040 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-14-012;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)		
2015	FJCBL04.8S12	4.765	Diesel	8,000		
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION			
Electronic Direct Injection, Turbocharger, Charge Air Cooler, Electronic Control Module, Exhaust Gas Recirculation, Selective Catalytic Reduction-Urea			Crane, Loader, Tractor, Dozer, Pump, Compressor, Forklift			

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kW-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED	EMISSION		EXHAUST (g/kW-hr)					OPACITY (%)		
POWER	STANDARD		NMHC	NOx	NMHC+NOx	СО	PM	ACCEL	LUG	PEAK
75 ≤ kW < 130	Tier 4 Final	STD	0.19	0.40	N/A	5.0	0.02	N/A	N/A	N/A
		CERT	0.08	0.37		0.1	0.02			

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this

__ day of February 2015.

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

U-R-049-0040 4/22/15

Engine Model Summary Template

ATTACH MENT

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM m (SAE Gross)	4.Fuel Rate: nm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SAE Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torqu	9.Emission Control Device Per SAE J1930
FJCBL04.8S12	448 TA4-108	D1A	145.2 @ 2000	109	53.9	413 @ 1500	122	41.1	DFI, ECM, EGR, TC, CAC, SCR
FJCBL04.8S12	448 TA4-129	D1A	173.3 @ 2050	135	62.2	509 @ 1500	149	50.3	DFI, ECM, EGR, TC, CAC, SCR
FJCBL04.8S12	448 TA4-129	E1A	173.3 @ 2050	135	62.2	509 @ 1500	149	50.3	DFI, ECM, EGR, TC, CAC, SCR
FJCBL04.8S12	448 TA4-129	E1C	173.3 @ 2050	135	62.2	509 @ 1500	149	50.3	DFI, ECM, EGR, TC, CAC, SCR
FJCBL04.8S12	448 TA4-108	L1A	145.2 @ 2000	109	53.9	413 @ 1500	122	41.1	DFI, ECM, EGR, TC, CAC, SCR
FJCBL04.8S12	448 TA4-108	L1C	145.2 @ 2000	109	53.9	413 @ 1500	122	41.1	DFI, ECM, EGR, TC, CAC, SCR
FJCBL04.8S12	448 TA4-108	C1A	145.2 @ 2000	109	53.9	413 @ 1500	122	41.1	DFI, ECM, EGR, TC, CAC, SCR
FJCBL04.8S12	448 TA4-108	C1C	145.2 @ 2000	109	53.9	413 @ 1500	122	41.1	DFI, ECM, EGR, TC, CAC, SCR
FJCBL04.8S12	448 TA4-108	V1A	145.2 @ 2000	109	53.9	413 @ 1500	122	41.1	DFI, ECM, EGR, TC, CAC, SCR
FJCBL04.8S12	448 TA4-108	V1C	145.2 @ 2000	109	53.9	413 @ 1500	122	41.1	DFI, ECM, EGR, TC, CAC, SCR
FJCBL04.8S12	448 TA4-108	W1A	145.2 @ 2000	109	53.9	413 @ 1500	122	41.1	DFI, ECM, EGR, TC, CAC, SCR
FJCBL04.8S12	448 TA4-108	W1C	145.2 @ 2000	109	53.9	413 @ 1500	122	41.1	DFI, ECM, EGR, TC, CAC, SCR
FJCBL04.8S12	448 TA4-108	I2A	145.2 @ 2000	109	53.9	413 @ 1500	122	41,1 -	DFI, ECM, EGR, TC, CAC, SCR
FJCBL04.8S12	448 TA4-108	12C	145.2 @ 2000	109	53.9	413 @ 1500	122	41.1	DFI, ECM, EGR, TC, CAC, SCR
FJCBL04.8S12	448 TA4-129	I2A	173.3 @ 2050	135	62.2	509 @ 1500	149	50.3	DFI, ECM, EGR, TC, CAC, SCR
FJCBL04.8S12	448 TA4-129	I2C	173.3 @ 2050	135	62.2	509 @ 1500	149	50.3	DFI, ECM, EGR, TC, CAC, SCR
FJCBL04.8S12	448 TA4-108	· L1B	145.2 @ 2000	109	53.9	413 @ 1500	122	41.1	DFI, ECM, EGR, TC, CAC, SCR
FJCBL04.8S12	448 TA4-108	I2B	145.2 @ 2000	109	53.9	413 @ 1500	122	41.1	DFI, ECM, EGR, TC, CAC, SCR
FJCBL04.8S12	448 TA4-108	I2D	145.2 @ 2000	109	53.9	413 @ 1500	122	41.1	DFI, ECM, EGR, TC, CAC, SCR
FJCBL04.8S12	448 TA4-129	I2B	173.3 @ 2050	135	62.2	509 @ 1500	149	50.3	DFI, ECM, EGR, TC, CAC, SCR
FJCBL04.8S12	448 TA4-129	I2D	173.3 @ 2050	135	62.2	509 @ 1500	149	50.3	DFI, ECM, EGR, TC, CAC, SCR

* New Models